Visual Aid for Blind

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https://github.com/niyaspcet/MTechMainProject

Guide
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Overview

Introduction

- vision plays a vital role in gaining knowledge of the surrounding world.
- According to the WHO
  - There are 285 million people in the world with visual impairment.
  - 39 million of whom are blind
- Several systems were designed to improve the quality of life of VI (Visually Impaired) people.
- White cane and guide dogs were used traditionally
- Electronic aids are used nowadays
- ETA (Electronic Travel Aids) is an example of such sytem

Motivation

- 90% of VI people lives in developing countries like india
- Improving the quality of life of such people is one of the challenging task
- Even though there were different travel aids, the acceptance of visual aids are quite low among VI impaired people, which implies further researches.

Problem Statement

Develop a visual aid which helps visual impaired people with great acceptance among visually impaired people

Possible Solutions

Commonly using visual aids are

- Navigation Aids
- Object and people identification aids
- Reading Aids
- Invasive techniques such as implants
- Senory Substitution Devices (SSD)

Choosen Solution

Visual Aid for visually impaired people by using non implant Sensory Substitution Device

SSD

- Invasive techniques such as implants provide low resolution imagery by stimulating surviving retinal cells, cortex or optic nerve.
  - Risk associated with surgical procedures
  - Expensive
- **SSD**: Non-invasive methods rely on human-centered computing that bring together signal processing and person-centered computing to harness the plasticity of the person's brain to process information usually attributed to the impaired modality via an unimpaired modality[1].
  - Visual to Tactile (VT)
  - Visual to Auditory (VA)

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Questions ?

Thank You